

Science, Service, Stewardship



Species of Concern Proactive Conservation Program

Southeast Region

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Definition

A “Species of Concern” is a species or vertebrate population for which there is concern or great uncertainty about its status. Species of Concern are not listed under the Endangered Species Act (ESA) and are not protected by the ESA. As resources permit, the National Marine Fisheries Service (NMFS) conducts a review of the status of each Species of Concern to determine if it warrants listing as an endangered or threatened species under the ESA. NMFS believes it is important to highlight species that could benefit from proactive conservation efforts.



Program Inception

- Program Start Date: 2004
- Number of SOC species in 7 regions: 42
 - 1 marine mammal
 - 34 fishes (6 sharks)
 - 2 corals
 - 4 West coast Abalone
 - 1 Hawaiian brachiopod
- FY 2006-2008 Grant Funds disbursed: \$1,620,000





Goals of the Program

- To increase public awareness about these species
- To identify those species potentially at risk and in need of protective measures before listing under the ESA becomes necessary
- To identify data deficiencies and uncertainties associated with the status of the species
- To work cooperatively with regional co-managers and interest groups to obtain the information necessary to evaluate species status and threats
- To identify conservation opportunities
- To work proactively with Federal and state agencies, Native American tribes, and the public to conserve the species



Program Accomplishments for 2007

- SOC's will now be included as indicator species in the National Marine Sanctuaries program and in the Sanctuaries Encyclopedia
- NMFS' Habitat Protection Division agreed to collaborate with their Coastal Habitat Protection Plans conservation program and the regional office's division offered to help fund some ongoing SOC grant projects
- Over 250 people were introduced to the program through outreach
- 3 conferences were held in 2007
- Multiple status reviews and research projects of NMFS staff were funded internally with \$180,000 in program funds



Criteria for Identification

Abundance and productivity:

- Magnitude of decline – combination of recent rate of decline and historical extent of decline
- Natural rarity – species known only from a few specimens or that occurs rarely and in small numbers
- Endemism – species or population that is native to a particular place and is only found there

Distribution:

- Population connectivity – level of reproductive exchange among related populations
- Limited geographic range – found in a limited area
- Endemism – species or population that is native to a particular place and is only found there



Criteria for Identification (continued)

Life-history characteristics:

- Vulnerable life-history strategies – e.g., low fecundity, late age at maturity, slow growth rates
- Resilience to environmental variability and catastrophes
- Loss of unique life-history traits

Threats:

- Extraction – permanently removes the species from its habitat
- Habitat degradation and loss – destruction, modification, or loss to a species' habitat that could result in a lower carrying capacity
- Disease and predation – can influence the abundance and productivity of a species or population
- Other natural or man-made factors for decline: includes ocean conditions and poor hatchery practices



Species in the Southeast



- Alabama Shad
- Atlantic Sturgeon
(candidate)
- Dusky Shark
- Ivory Tree Coral
- Key silverside
- Largetooth Sawfish
- Mangrove Rivulus
- Nassau Grouper
- Mangrove Rivulus
- Night Shar
- Opossum Pipefish
- Riverherring
- Saltmarsh Topminnow
- Speckled Hind
- Sand Tiger Shark
- Striped Croaker
- Warsaw Grouper



Education and Outreach

- Participate in the Proactive Species Conservation Grant Program for species research
 - <http://www.nmfs.noaa.gov/pr/species/concern/grant.htm>
- Participate in NOAA's Community-based Restoration Grant Program for habitat grants
 - http://www.nmfs.noaa.gov/habitat/restoration/funding_opportunities/funding_ser.html
- Volunteer with local organizations to help clean up coastal areas
- Include brochures or flyers at events and institutions that deal with marine education
- Visit local aquariums that house SOC's
 - Florida Aquarium
 - Pier Aquarium



Recent Outreach Activities

- Flyers distributed at University of South Florida's College of Marine Science National Ocean Sciences Bowl
- Brochures displayed at the Florida Aquarium and Pier Aquarium in Tampa and St. Pete, Florida
- Contributed educational material to the Florida Marine Science Educators Association conference
- Species information added to Wikipedia
- National SOC Conference held September 2008
- Species information being added to the Encyclopedia of Life





Recent Documents

- NMFS Status Reviews
 - White Marlin (2007 -Species removed due to findings)
 - Night Shark (2008)
 - Sand Tiger Shark (In progress)
- 2007 SOC Annual Report
- 2008 Annual Report currently being written
- Alabama Shad Article (Meadows 2007)
- Riverherring Article (Meadows 2008)





Conservation Efforts

NMFS SOC and Candidate Species Lists

- Species on either list are not afforded protection under the Endangered Species Act. The SOC and Candidate Lists act as proactive measures for species conservation
- U.S. Fish and Wildlife Service Candidate species are also not afforded ESA protection

IUCN Red List

- The IUCN Red List of Threatened Species is widely recognized as the most reliable evaluation of the world's species. It classifies them according to their extinction risk and brings into sharp focus the ongoing decline of the world's biodiversity and the impact that mankind is having upon life on Earth. (IUCN website)



Conservation (continued)

American Fisheries Society's objectives:

- promote the conservation, development, and wise use of the fisheries;
- promote and evaluate the development and advancement of all branches of fisheries science and practice;
- gather and disseminate to Society members and the general public; scientific, technical, and other information about fisheries science and practices through publications, meetings, and other forms of communication; and
- encourage the teaching of fisheries science and practice in colleges and universities and the continuing education and development of fisheries professionals. (AFA website)

State Protection

- Each state has its own policies and legislation regarding marine species, please check each state for these protective measures.



Interesting Facts

- The mangrove rivulus can spend up to 66 consecutive days outside of water, usually in fallen logs, where it breathes air through its skin by gill alteration.
- Sand tiger shark pups eat the weaker ones during gestation (intrauterine cannibalism).
- Atlantic sturgeon are one of the oldest vertebrates, with fossils dating back more than 120 million years. They are also known for jumping completely out of the water, and have even injured boaters.





Frequently Asked Questions

What is a candidate species?

- The regulations implementing section 4 of the ESA (49 FR 38900; October 1, 1984) define “candidate” as “any species being considered by the Secretary for listing as an endangered or a threatened species, but not yet the subject of a proposed rule.” 50 CFR 424.02 Such a designation does not confer any procedural or substantive protections of the ESA on the candidate species.

Are the species on NMFS’ candidate species list because they were being considered for listing as threatened or endangered?

- No. The majority of these species have been on our candidate species list because there is concern or great uncertainty about biological status and threats, not because they are actively being considered for listing under the ESA. Regardless, because they are termed “candidate species,” this has led the public and individuals within our own agency to believe that these species are going to be listed as threatened or endangered under the ESA in the near future.



FAQs (continued)

How are species of concern identified?

- NMFS considers demographic and genetic diversity concerns, as further elaborated by the following factors, in identifying species of concern: abundance and productivity (e.g., the magnitude of decline, natural rarity, and restricted endemism); distribution (e.g., population connectivity, limited geographic range and restricted endemism); and life-history characteristics (e.g., vulnerable life-history strategies, resilience to environmental variability and catastrophes, or the loss of unique life-history traits).

When will a species be considered a candidate species?

- If a species of concern is undergoing an ESA status review as a result of a petition and a “may be warranted” finding under section 4(b)(3)(A) of the ESA, it is also, by definition, a NMFS candidate species until the review is complete. Further, species of concern that are undergoing status reviews but were not petitioned for listing will be considered candidate species if the initiation of a status review is announced in the *Federal Register*. This limited use of the term “candidate species” is consistent with the definition of candidate species described in section 4 of the ESA.



FAQs (continued)

Do NMFS and the U.S. Fish and Wildlife Service differ in the way they apply the term “candidate species”?

- To avoid possible confusion, it bears mentioning here that although NMFS and FWS define “candidate species” the same way in their joint regulations, the two agencies have slightly different interpretations of the term. FWS candidate species are those species for which FWS has sufficient information to support an ESA listing but for which issuance of a proposed rule is precluded due to higher priority listings (1 FR 64481; December 5, 1996). Therefore, FWS has already determined that its candidate species warrant listing under the ESA. In contrast, a NMFS candidate species may not have reached that threshold, since NMFS’ interpretation of the term also includes species for which the Secretary has determined, following review of a petition, that listing may be warranted (thereby triggering the need for a status review).



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